

**AGREEMENT GOVERNING THE DELEGATION OF CERTAIN SURVEY  
AND CERTIFICATION SERVICES**

**FOR UNITED STATES OF AMERICA FLAGGED VESSELS**

**between the**

**UNITED STATES COAST GUARD**

**and**

**LLOYD'S REGISTER OF SHIPPING**

**1. Application.**

This Agreement delegates authority and sets forth guidelines for cooperation between the United States Coast Guard and Lloyd's Register of Shipping, hereafter referred to as "Coast Guard" and "Lloyd's Register," respectively. The term "Agreement" in this document refers to the Agreement and any annexes or amendments that may be agreed upon by Lloyd's Register and the Coast Guard. In this Agreement, the term "Commandant" refers to the United States Coast Guard Assistant Commandant for Marine Safety and Environmental Protection.

This authority relates to the initial and subsequent surveys and periodic reinspections or examinations of vessels of the United States, as defined by 46 United States Code, Section 2101(46), both in the United States and in foreign countries, in the review and approval of plans, the tonnage measurement of vessels, and in associated activities. Nothing in this Agreement alters in any way the statutory or regulatory authority of the Coast Guard.

**2. Purpose.**

The purpose of this Agreement is to authorize Lloyd's Register to perform specified vessel survey functions on U.S. flagged vessels on behalf of the Coast Guard.

This Agreement defines the scope, terms and conditions and requirements of the delegated authority to Lloyd's Register.

**3. General Conditions.**

Delegated functions performed by, and certificates issued by, Lloyd's Register will be accepted as functions performed or certificates issued by the Coast Guard, provided that Lloyd's Register remains in compliance with all provisions of this Agreement.

**4. Authorized Functions.**

4.1 The Coast Guard delegates to Lloyd's Register the authority to measure vessels, conduct the initial and subsequent surveys, periodic reinspections and examinations including drydocking

examinations and the authority to issue and endorse certain certificates as provided in Annex 1 of this Agreement for U.S. flagged vessels, both in the United States and in foreign countries. In carrying out these functions, Lloyd's Register shall comply with any restrictions, special instructions or supplemental requirements as required by the Agreement.

4.2 The Coast Guard will accept the review and approval of vessel plans by Lloyd's Register in the same manner as if approved by the Coast Guard for those plans related to the functions authorized by this Agreement.

4.3 The Coast Guard retains the authority to revoke or suspend any certificates issued by Lloyd's Register on behalf of the Coast Guard. This authority is not extended to Lloyd's Register. (See paragraph 6.3 for related reporting requirements.)

5. Legal Basis.

The Coast Guard is statutorily authorized to administer laws and promulgate and enforce regulations for the promotion of the safety of life and property at sea and the protection of the marine environment. In accordance with the authority granted by Title 46, United States Code, Section 3316, and as implemented under the regulations in Title 46, United States Code of Federal Regulations, Part 8, the Coast Guard may delegate plan review and approval, inspections and examinations and issuance of certain international convention certificates. The Coast Guard also has statutory authority under Title 46, United States Code, Part J - Measurement of Vessels, for the measurement and the certification of tonnage for vessels for which the application of a law of the United States depends on the vessel's tonnage. Under Title 46, United States Code, Section 14103, the Coast Guard may delegate the authority to measure vessels to qualified persons. Title 46, United States Code, Section 5107, authorizes the Coast Guard to delegate the authority to assign load lines, survey vessels, determine that load line marks are marked correctly, and issue load line certificates to qualified organizations.

6. Reporting Requirements.

6.1 All notifications made by Lloyd's Register under this Agreement shall be made within the time frames specified herein once Lloyd's Register has become aware of the incident, infraction or deficiencies.

6.2 Lloyd's Register shall immediately notify the Commandant of any events where it finds itself unable to fulfill its responsibilities set forth in this Agreement.

6.3 When Lloyd's Register determines that a U.S. flagged vessel receiving certificates under this Agreement is not in compliance with class rules, applicable international conventions, or supplemental requirements under which its certificates were issued and corrective action is either insufficient to ensure compliance or is not taken or are beyond any extensions allowable under the appropriate instruments, Lloyd's Register shall immediately report this to the Coast Guard. The report shall contain the vessel name and official number, if applicable, and a description of the circumstances and deficiencies.

6.4 Lloyd's Register shall report to the Commandant in writing the names and official numbers, if applicable, of any vessels removed from Lloyd's Register class for which Lloyd's Register has performed any function delegated under this Agreement on behalf of the Coast Guard. The written notification shall be made within thirty days, and shall include a description of the reason for the removal from class.

6.5 Lloyd's Register shall, upon notification of such events, inform the Commandant immediately of all cases where U.S. flagged vessels, subject to, or having surveys performed under this Agreement, have been detained under port state control proceedings, or have otherwise been found unfit to proceed to sea without endangering the ship, persons on board or presenting an unreasonable threat or harm to the environment. The report shall contain a description of the circumstances and deficiencies.

6.6 If while performing the delegated functions of this Agreement, an employee of Lloyd's Register discovers any deficiency that directly or indirectly affects the validity of any aspect of a certificate issued by another classification society, Lloyd's Register shall notify as soon as practicable, but no later than fifteen days following discovery, the cognizant office of that classification society both verbally and in writing. A copy of the written notice shall be simultaneously provided to the Commandant.

6.7 Lloyd's Register shall provide to the Commandant within sixty days of publication the Lloyd's Register of classed vessels.

7. Development of rules and/or regulations -- Information.

7.1 Lloyd's Register shall designate appropriate persons employed exclusively by Lloyd's Register to serve as points of contact with the appropriate Coast Guard personnel on matters of interpretation, policy and the working relationship.

7.2 Lloyd's Register shall allow the Commandant to participate in the development of class rules and provide the Commandant the opportunity to comment on any proposed changes to its class rules and to respond to the disposition of those comments.

7.3 Where Lloyd's Register adopts changes to its rules for ship classification that are determined by the Coast Guard to be inconsistent with Title 46, United States Code of Federal Regulations, Chapter I, or Coast Guard policy, the Coast Guard may require Lloyd's Register to administer corrective measures or provisions to any rules or activities that affect any delegated activities on behalf of the Coast Guard.

7.4 Lloyd's Register shall submit for approval by the Coast Guard proposed changes to any supplemental requirements to Lloyd's Register rules that may affect any vessel inspection or certification activities by Lloyd's Register under this Agreement.

8. Other Conditions.

8.1 Remuneration for delegated survey and certification services carried out by Lloyd's Register on behalf of the Coast Guard will be charged by Lloyd's Register directly to the party requesting such services.

8.2 Lloyd's Register shall provide the Commandant with a current copy of fee schedules, including changes to the schedule, for all functions delegated under this Agreement.

8.3 In issuing certificates or performing other functions on behalf of the Coast Guard under this Agreement, Lloyd's Register shall apply Coast Guard interpretations, when they exist, to international conventions.

8.4 Lloyd's Register shall ensure that its employees engaged in the performance of functions delegated under this Agreement are familiar with and require compliance with applicable United States laws and regulations, Coast Guard policies, interpretations, and instructions, including: (1) the International Convention for the Safety of Life at Sea (SOLAS), and, where authorized, other applicable international conventions to which the United States is a party; (2) United States statutes; (3) United States federal regulations; (4) Lloyd's Register rules and regulations for the classification of ships; and (5) any restrictions, special instructions, or supplemental requirements as required by this Agreement.

8.5 Only exclusive employees of Lloyd's Register are authorized to perform work pursuant to any delegated function specified under this Agreement.

8.6 Lloyd's Register shall honor any appeal decision made by the Commandant on issues related to delegated functions under this Agreement.

8.7 Lloyd's Register, in exchange for express assurances of confidentiality, will in furtherance of this agreement, provide the Coast Guard with information which is otherwise not available to private or public parties. This information is only provided to the Coast Guard due to the express assurance of confidentiality, and in the event that the confidentiality is breached, it will serve as a basis for restricting access by the Coast Guard to Lloyd's Register's confidential and proprietary information. It is further expressly agreed that the Coast Guard will promptly notify Lloyd's Register upon receipt of any request for Lloyd's Register's records.

8.8 In the event the Coast Guard is found liable in a court of law for losses or damages sustained due to a negligent act or omission by Lloyd's Register, its officers, employees or others who were acting on behalf of Lloyd's Register pursuant to this Agreement, the Coast Guard is entitled to obtain compensation from Lloyd's Register up to, but not exceeding, the amount of the Coast Guard's financial liability.

8.9 While acting on behalf of the Coast Guard under this Agreement, Lloyd's Register shall be free to create contracts directly with clients and such contracts may contain Lloyd's Register's normal contractual conditions for limiting its legal liability.

8.10 This Agreement becomes effective upon authorized signature of both the Coast Guard and

Lloyd's Register.

8.11 Termination of this Agreement, any delegated functions under this Agreement and any amendments to this Agreement will occur sixty days after written notice has been given by either party.

8.12 Revocation and termination of this Agreement, any delegated functions under this Agreement and any amendments to this Agreement may be made under the following conditions:

8.12.1 Failure of Lloyd's Register to maintain the minimum standards of a recognized classification society, set forth in Title 46, United States Code of Federal Regulations, Part 8, Subpart B, may be cause for termination of Lloyd's Register as a recognized classification society.

8.12.2 Termination of Lloyd's Register as a recognized classification society by the Coast Guard will terminate this Agreement.

8.12.3 Breach of any terms or conditions of this Agreement may be cause for termination of the Agreement.

8.12.4 The Agreement shall be governed by and conducted in accordance with United States law.

8.13 The interpretation by the Coast Guard of the technical aspects of this Agreement shall be final.

8.14 Amendments to this Agreement or the acceptance of revised annexes shall become effective only after consultation and written agreement between the Coast Guard and Lloyd's Register. Amendments and revised annexes shall go into effect upon authorized signature of both parties.

## **9. Specification of Delegated Functions.**

9.1 This Agreement applies to those U.S. flagged vessels that carry international certificates for which Lloyd's Register performs any delegated function under this Agreement.

9.2 Authorized functions, applicable instruments and any restrictions, special instructions or supplemental requirements for those functions performed on behalf of the Coast Guard are contained in annexes of this Agreement.

9.3 Lloyd's Register shall obtain approval from the Commandant prior to granting exemptions from the requirements of international conventions, class rules and any applicable U.S. supplemental requirements to Lloyd's Register class rules related to any authorized functions performed on behalf of the Coast Guard under this Agreement.

9.4 Lloyd's register shall obtain approval from the Commandant prior to granting any

extensions of authorized certificates. Lloyd's Register will apply to the Coast Guard for approval as far in advance as practical with the circumstances and conditions related to the requested extension.

9.5 Lloyd's Register shall attend any U.S. flagged vessel for which it has performed any delegated function on behalf of the Coast Guard at the request of an appropriate Coast Guard official.

9.6 Lloyd's Register shall accept all requests to perform delegated services without regard to the vessel's location, unless prohibited from doing so under the laws of the United States or under the laws of the jurisdiction in which the vessel is located.

9.7 Lloyd's Register shall allow those exclusive employees, authorized to perform delegated functions on behalf of the Coast Guard, to participate in training with the Coast Guard regarding those functions.

9.8 All documentation issued by or requested from Lloyd's Register pursuant to this Agreement shall be in the English language.

9.9 Lloyd's Register shall maintain a corporate office in the United States that has adequate resources and staff to support all delegated functions.

9.10 All records of survey, inspection, examination, review and approval related to delegated functions conducted on behalf of the Coast Guard shall be maintained in the United States in accordance with the provisions of Title 46, United States Code, Section 3316.

## 10. Supervision of Delegated Functions.

10.1 Lloyd's Register shall allow the Coast Guard to accompany internal and external quality audits and shall provide written results of such audits to the Commandant upon request.

10.2 Lloyd's Register shall provide the Coast Guard sufficient access necessary to oversee Lloyd's Register to ensure that it continues to comply with the minimum standards required for a recognized classification society as set forth in Title 46, United States Code of Federal Regulations, Part 8.

10.3 Lloyd's Register shall provide a copy of its regulations, rules, instructions, survey procedures, circulars and guidelines that are related to the performance of the delegated functions under this Agreement to the Commandant.

- 10.3.1 All of the following written documents related to the performance of the delegated functions shall be made available to the Coast Guard by Lloyd's Register:
- (a) equivalency determinations,
  - (b) surveys,
  - (c) certificates,

- (d) report forms,
- (e) vessel deficiencies, and
- (f) Lloyd's Register vessel recommendations.

10.4 Lloyd's Register shall grant the Coast Guard access to all plans and documents, including survey reports, on the basis of which international certificates are issued or endorsed by Lloyd's Register on behalf of the Coast Guard.

10.5 Lloyd's Register shall provide information and access to the Coast Guard to conduct oversight of its activities related to delegated functions conducted on behalf of the Coast Guard pursuant to this Agreement.

10.6 At the request of the Commandant, Lloyd's Register shall provide any information, statistics and data related to U.S. flagged vessels' compliance to Lloyd's Register rules for the classification of ships, supplemental requirements under this agreement and any appropriate Coast Guard regulations including reports of damage and/or casualties that such vessels may have incurred.

**This Agreement commences upon receipt of the authorized signature from both the Coast Guard and Lloyd's Register.**

For the United States Coast Guard

For Lloyd's Register of Shipping

/signed/\_\_\_\_\_ on 3 Oct 1997

/signed/\_\_\_\_\_ on \_3 Oct 1997

R. C. North  
Rear Admiral, United States Coast Guard  
Assistant Commandant for Marine Safety  
and Environmental Protection

A. J. Latchford  
Lloyd's Register of Shipping  
Group Regional Manager for  
North America

## **Annex 1**

### **To the AGREEMENT GOVERNING THE DELEGATION OF CERTAIN SURVEY AND CERTIFICATION SERVICES**

### **FOR UNITED STATES OF AMERICA FLAGGED VESSELS**

**between the**

**UNITED STATES COAST GUARD**

**and**

**LLOYD'S REGISTER OF SHIPPING**

### **APPLICABLE INSTRUMENTS AND AUTHORIZATIONS**

#### **1. Tonnage**

**A.** The following instruments apply:

- International Convention on Tonnage Measurement of Ships of 1969, and Title 46, United States Code of Federal Regulations, Part 69, Subpart B - Convention Measurement System
- Title 46, United States Code of Federal Regulations, Part 69, Subpart C - Standard Measurement System
- Title 46, United States Code of Federal Regulations, Part 69, Subpart D - Dual Measurement System.

**B.** Lloyd's Register is authorized to issue Tonnage certificates and perform all related functions in accordance with either the International Convention on Tonnage Measurement of Ships, 1969, or in accordance with the Standard or Dual Measurement Systems under Title 46, United States Code, Chapter 145.

**C.** In addition to the conditions set forth in the Agreement and the requirements set forth in the applicable instruments, the following conditions will be adhered to in execution of this authorized function on behalf of the Coast Guard:

1.1 Lloyd's Register may use part-time employees or independent contractors in lieu of exclusive employees to provide measurement services, provided such individuals have been specifically designated by Lloyd's Register to perform this function.

1.2 Lloyd's Register shall not use an employee or contractor to measure and certify the tonnage of a vessel if that employee or contractor is acting or has acted as a tonnage consultant for the same vessel.



1.3 Lloyd's Register shall physically conduct a compliance inspection before issuing each tonnage certificate.

1.4 Lloyd's Register will notify the Coast Guard of scheduled meetings that may take place between Lloyd's Register and other vessel tonnage measurement organizations pertaining to tonnage measurement of U.S. flagged vessels or to systems under which U.S. flagged vessels are measured.

## **2. Load Line**

**A.** The following instruments apply:

- International Convention on Load Lines, 1966
- Supplement relating to the International Convention on Load Lines, 1966
- Protocol of 1988 relating to the International Convention on Load Lines, 1966

**B.** Lloyd's Register is authorized to issue International Load Line certificates and perform all related functions in accordance with the International Convention on Load Lines.

**C.** In addition to the conditions set forth in the Agreement and the requirements set forth in the applicable instruments, the following conditions will be adhered to in execution of this authorized function on behalf of the Coast Guard:

2.1 All requests for exemptions, equivalencies, and experimental purposes (per International Convention on Load Lines Articles 6, 8, and 9, respectively), or other special considerations allowed under the International Convention on Load Lines at the discretion of the Flag Administration, must be forwarded to the Commandant for approval. Such requests must include supporting information and a recommendation from Lloyd's Register concerning approval. Upon approval by the Commandant, Lloyd's Register may issue the appropriately annotated International Load Line Certificate.

## **3. SOLAS Cargo Ship Safety Construction Certificate**

**A.** The following instruments apply:

- International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended

**B.** Lloyd's Register is authorized to conduct plan review and approval, initial and subsequent surveys, periodic reinspections and examinations and to issue and endorse the SOLAS Cargo Ship Safety Construction Certificate.

**C.** In addition to the conditions set forth in the Agreement and the requirements set forth in the applicable instruments, the following conditions will be adhered to in execution of this authorized function on behalf of the Coast Guard.

3.1 The authority to survey and certify U.S. flagged vessels for the SOLAS Cargo Ship Safety Construction Certificate becomes effective upon the development by both parties and the approval by the Coast Guard of any supplemental requirements to Lloyd's Register Rules for the Classification of Ships as listed in Annex 2. The approval will be clearly annotated on an accompanying coversheet signed by an authorized member of the Coast Guard, and coversheet will be appended to the Agreement.

3.2 Lloyd's Register shall, in addition to the requirements of class rules and applicable conventions, apply the supplemental requirements referenced in Annex 2 when performing any authorized function on behalf of the Coast Guard pertaining to the survey and certification of U.S. flagged vessels for the SOLAS Cargo Ship Safety Construction Certificate.

**This Agreement commences upon receipt of the authorized signature from both the Coast Guard and Lloyd's Register.**

For the United States Coast Guard

For Lloyd's Register of Shipping

/signed/ \_\_\_\_\_ on 3 Oct 1997

/signed/ \_\_\_\_\_ on 3 Oct 1997

R. C. North  
Rear Admiral, United States Coast Guard  
Assistant Commandant for Marine Safety  
and Environmental Protection

A. J. Latchford  
Lloyd's Register of Shipping  
Group Regional Manager for  
North America

## **Annex 2**

### **To the AGREEMENT GOVERNING THE DELEGATION OF CERTAIN SURVEY AND CERTIFICATION SERVICES**

### **FOR UNITED STATES OF AMERICA FLAGGED VESSELS**

**between the**

**UNITED STATES COAST GUARD**

**and**

**LLOYD'S REGISTER OF SHIPPING**

### **SUPPLEMENTAL REQUIREMENTS**

**1. Tonnage**

None

**2. Load Line**

None

**3. SOLAS Cargo Ship Safety Construction Certificate**

Supplementary requirements attached as Addendum to Annex 2.

**This Agreement commences upon receipt of the authorized signature from both the Coast Guard and Lloyd's Register.**

For the United States Coast Guard

For Lloyd's Register of Shipping

\_/signed/\_\_\_\_\_ on \_11 Nov 1998

\_/signed/\_\_\_\_\_ on \_4 Nov 1998

R. C. North  
Rear Admiral, United States Coast Guard  
Assistant Commandant for Marine Safety  
and Environmental Protection

A. J. Latchford  
Lloyd's Register of Shipping  
Group Regional Manager for  
North America



**Addendum to Annex 2**  
**To the AGREEMENT GOVERNING THE DELEGATION OF CERTAIN SURVEY**  
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**FOR UNITED STATES OF AMERICA FLAGGED VESSELS**  
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**SUPPLEMENTAL REQUIREMENTS**

REV. 1 (19 September 1998)

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1. **INTRODUCTION**

The supplemental requirements given in this document are those of the United States Coast Guard (USCG) which are contained in Title 46 of the Code of Federal Regulations but not covered by Lloyd's Register's Rules and Regulations for the Classification of Ships.

The document also contains interpretations of the 1974 Convention for Safety of Life at Sea, as amended, where the USCG has amplifying or additional requirements.

Compliance with these requirements, as applicable to ship type and size, is to be verified during plan review and survey of LR classed ships registered or intended to be registered in the United States of America.

**The requirements and procedures specified in this document are additional to those contained in the Marine Division Survey Procedures Manual which must also be complied with for U.S. flag ships.**

2. **SUPPLEMENTAL REQUIREMENTS**

2.1 **Tonnage Measurement**

There are no supplemental requirements. Tonnage measurement is to be in accordance with the extant "Instructions for use by delegated measurement organisations in preparing U.S. Tonnage Certificates" as issued by the Commanding Officer, U.S. Coast Guard Marine Safety Center.

All instructions for measurement, marking and certification will be issued from Headquarters (CSD/SCS/TON) upon request.

2.2 **Load Line**

There are no supplemental requirements. Plan approval, stability investigation and survey is to be in accordance with the Classification Rules and Marine Division Survey Procedures Manual Parts D and E concerning Statutory Surveys, Certification and Reporting.

2.3 **SOLAS**

The following supplemental requirements relevant to the issue of a Cargo Ship safety Construction Certificate by LR or the issue of a Passenger Ship Safety Certificate by the U.S. Coast Guard are given using the appropriate Code of Federal Regulations (CFR) cite.

**Cite: 46 CFR 32.20-5**

Pressure-vacuum relief valves are to be of a type approved by the Coast Guard under 46 CFR 162.017.

Pressure-vacuum relief valves, determined by LR to be equivalent to a valve designed to meet the requirements of 46 CFR 162.017, may be submitted to the Coast Guard for acceptance on a case by case basis.

**Cite: 46 CFR 32.50-30**

If a cargo hose is carried on oil tankers it must be suitable for oil service and designed to withstand the pressure of the shutoff head of cargo pump or pump relief valve setting less static head, but in no case less than 150 psi.

**Cite: 46 CFR 32.52-5(c)**

Means are to be provided for controlling the cargo or pump room bilge pumps and their suctions or discharges in order that a flooded pumproom may be pumped out. Suitable portable or manually operated pumps may be accepted as complying with this provision, or alternatively, the pump controls shall be arranged so that they are operable from inside the pump room and either from an accessible position outside the pump room, or from the pump room casing above the freeboard deck.

**Cite: 46 CFR 39**

A vapour control system complying with the requirements of these regulations is required to be fitted. Full details of the regulations, plan appraisal and survey

procedures are given in the Marine Division Survey Procedures Manual Part D, Chapter 8, Section 14.8.

**Cite: 46 CFR 52.01-10(a)**

Oil fired main boilers in attended or unattended machinery spaces are to have the following equipment:

- Each burner is to be provided with at least one flame detector.
- The burner valve is to close automatically when loss of burner flame occurs and when activated by the boiler trip system.
- Each boiler is to be provided with a safety trip control system that automatically closes the master and all burner oil fuel valves upon:
  - Inadequate air flow to support complete combustion;
  - Loss of control power;
  - Operation of the manual safety trip; or
  - Loss of flame at all burners

**Cite: 46 CFR 52.01-50**

All boilers, except watertube boilers, with a maximum allowable working pressure in excess of 2.06 bar, if fired with solid fuel not in suspension, or if not equipped with unattended operation, are to be fitted with fusible plugs in accordance with this regulation.

**Cite: 46 CFR 52.01-105(c)**

Steam stop valves over 152mm diameter are to be fitted with bypass arrangements for heating the line and equalising the pressure before the valve is opened.

**Cite: 46 CFR 52.01-105(e)**

All firetube and drum type boilers are to be fitted with a scum (surface blowoff) valve in addition to a blow-down valve.



**Cite: 46 CFR 52.01-110(h)**

All watertube boilers used for propulsion purposes are to be provided with an audible and visual high water level alarm.

**Cite: 46 CFR 52.01-120**

The requirements of ASME Section 1, paragraph PG 68.2 are to be complied with, in agreement with the boiler manufacturer, to ensure that the superheater is protected against damage in all service conditions.

**Cite: 46 CFR 53.01-3**

Heating boilers for applications below 120°C and steam boilers with pressures less than 3.4 bar and which are not covered by LR Rules, are to be designed, constructed, inspected and tested under 46 CFR 53.01-3.

**Cite: 46 CFR 53.05**

Pressurised hot water boilers above 120°C and which are not covered by LR Rules, are to be provided with pressure relieving devices under 46 CFR 53.05-2.

**Cite: 46 CFR 56.20-15**

Valves in which the closure is accomplished by resilient non-metallic materials instead of metal to metal seating are to comply with the performance criteria and category of positive shut-off valves specified in this regulation.

**Cite: 46 CFR 56.50-60(d)**

Positive shut-off valves which utilise resilient non-metallic materials for closure are to comply with the applicable requirements of regulation 46 CFR 56.20-15.

**Cite: 46 CFR 61.05-10**

Hydrostatic testing of boilers in service is to be carried out in accordance with the periodical and test pressure requirements prescribed in this regulation.

**Cite: 46 CFR 61.15-5**

Steam piping subject to pressure from the main boiler should be subjected to a hydrostatic test in accordance with the requirements of this regulation after every five years of service.

**Cite: 46 CFR 61.15-10**

Where liquefied petroleum gas is used for heating and cooking the requirements of this regulation are to be complied with.

**Cite: 46 CFR 92.15**

Sec. 92.15-5 Vessels using fuel having a flashpoint of 110 degrees or lower.

(a) Where liquid fuel having a flashpoint of 110 degrees F. or lower is used for main or auxiliary machinery or for starting purposes, the spaces containing such machinery or fuel tanks shall have ventilation as required by this section.

(1) At least 2 ventilators fitted with cowls or their equivalent for the purpose of properly and effectively ventilating the bilges of every engine and fuel-tank compartment in order to remove any flammable or explosive gases.

(2) Vessels constructed so that the greater portions of the bilges under the engine and fuel tanks are open or exposed to the natural atmosphere at all times are not required to be fitted with ventilators.

Sec. 92.15-10 Ventilation for closed spaces.

(a) Except as noted in paragraph (c) of this section, all enclosed spaces within the vessel shall be properly vented or ventilated. Means shall be provided to close off all vents and ventilators.

(b) Means shall be provided for stopping all fans in ventilation systems serving machinery and cargo spaces and for closing all doorways, ventilators and annular spaces around funnels and other openings to such spaces, from outside these spaces, in case of fire.

(c) On unmanned cargo barges not fitted with a fixed bilge system, vents and ventilators may be omitted from void spaces.

(d) The ventilation of spaces which are “specially suitable for vehicles” shall be in accordance with the provisions of this paragraph. In addition, if vehicles are operated inside of enclosed spaces, the ventilation shall be in accordance with subpart 97.80 of this subchapter.

(1) Areas below the weather deck shall be provided with continuous pressure-positive ventilation at each level on which vehicles are transported.

(2) The quantity of ventilating air shall be not less than 1 cubic foot per minute per square foot of deck area.

(3) The ventilation system shall be such as to prevent air stratification as well as to prevent the accumulation of air pockets.

(4) An alarm system shall be provided which will indicate the loss of required ventilation. The alarm location shall be in a normally manned space acceptable to the Commandant.

(e) For requirements regarding controls of electrically powered ventilation systems, see subchapter J (Electrical Engineering) of this chapter.

Sec. 92.15-15 Ventilation for crew quarters and, where provided, passenger spaces.

(a) All living spaces shall be adequately ventilated in a manner suitable to the purpose of the space.

(b) On vessels of 100 gross tons and over, except for such spaces as are so located that under all ordinary conditions of weather, windows, ports, skylights, etc., and doors to passageways can be kept open, all crew spaces shall be ventilated by a mechanical system, unless it can be shown that a natural system will provide adequate ventilation. However, vessels which trade regularly in the tropics shall, in general, be fitted with a mechanical ventilation system.

**Cite: 46 CFR 111.12-1**

(b) Each generator prime mover must have an overspeed device that is independent of the normal operating governor and adjusted so that the speed cannot exceed the maximum rated speed by more than 15 percent.

(c) Each prime mover must shut down automatically upon loss of lubricating pressure to the generator bearings unless otherwise accepted by the Commandant.

**Cite: 46 CFR 111.25-15**

Each motor must be rated for continuous duty, except a motor for an application listed in Table 111.25-15 or a similar duty must meet the minimum short-time rating stated in the table.

Table 111.25-15

Application of motor	Minimum short-time rating of motor, in hours
Deck winch and direct acting capstan	Half
Deck winch with hydraulic transmission	Continuous at no load followed by 1/2 hr. at full load
Direct acting windlass	One fourth
Windlass with hydraulic transmission	Half hour idle pump operation, followed by 1/4 hr. full load operation
Steering gear, direct acting	One
Steering gear, indirect drive	Continuous operation at 15 pct. load followed by 1 hr. at full load
Watertight door operators	1/12
Boat winches	1/12

**Cite: 46 CFR 111.70-5**

(a) If an enclosure for a motor, master switch, or other equipment has an electric heater inside the enclosure that is energized from a separate circuit, the heater circuit must be disconnected from its source of potential by a disconnect device independent of the enclosure containing the heater. The heater disconnecting device must be adjacent to the equipment disconnecting device. A fixed sign,

warning the operator to open both devices, must be on the enclosure of the equipment disconnect device, except as in paragraph (b) of this section.

(b) If the location of the enclosure for a motor, master switch, or other equipment for deck machinery is remote from the motor and controller disconnect device, a sign must be fixed to the enclosure if the disconnect arrangement required by paragraph (a) of this section is not used. The sign must warn the operator of the presence of two sources of potential within the enclosure and show the location of the heater circuit disconnect device.

(c) Electric heaters installed within motor controllers and energized from a separate circuit must be disconnected in the same manner as required by paragraph (a) of this section or by Sec. 111.70-7(d).

**Cite: 46 CFR 111.95-7**

(a) If the motor controller of a boat winch power unit is next to the winch, the main line emergency switch must disconnect all parts of the boat winch power unit, including the motor controller and limit switches, from all sources of potential. Other power circuit switches must be connected in series with the main line emergency switch and must be ahead of the motor controller. The main line emergency switch must be the motor and controller disconnect required by Subpart 111.70 and must have a horsepower rating of at least that of the winch motor.

(b) If the motor controller of a boat winch power unit is remote from the winch, there must be a switch at the controller that can disconnect the entire winch electric installation from all sources of potential. The switch must be in series with and on the supply side of the main line emergency switch.

(c) Each davit arm limit switch, whether connected in the power circuit or in the control circuit, must disconnect all ungrounded conductors of the circuit controlled.

(d) If one motor is used with two winches, there must be a main line emergency switch, a clutch interlock switch, and a master switch for each winch, except that a single main line emergency switch located as required by paragraph (e) of this section may be used for both winches. The main line emergency switches must be connected, in series, ahead of the motor controller. The master switches must be connected in parallel and each, in series, with the corresponding clutch interlock switch for that winch. Each clutch interlock switch must open the circuit to its master switch, except when the power unit is clutched to the associated winch. There must be a means to prevent the power unit from being clutched to both winches simultaneously.

(e) The main line emergency disconnect switch must be adjacent to the master switch, within reach of the winch operator, accessible to the person in charge of the boat stowage, and for gravity davit installations, in a position from which the movement of boat davit arms can be observed as they approach the final stowed position.

**Cite: 46 CFR 112.05-5**

(a) The emergency power source must meet table 112.05-5(a) and have the capacity to supply all loads that are simultaneously connected to it, except a load on a bus-tie to the main switchboard or non-required loads that are connected in accordance with Sec. 112.05-1(c).

Table 112.05-5(a)

Size of vessel and service	Type of emergency power source or lighting	Period of operation and minimum capacity of emergency power
Passenger vessels:		
Ocean, Great Lakes, or coastwise; or on an international voyage	Temporary emergency power source; and final emergency power source (automatically connected storage battery or an automatically started generator).	36 hours.\1\ \2\
Other than Ocean, Great Lakes, or coastwise and not on an international voyage	Final emergency power source (automatically connected storage battery or an automatically started generator).	8 hours or twice the time of run, whichever is less.\2\

Cargo vessels; miscellaneous self-propelled vessels; tankships; barges with sleeping accommodations for more than 6 persons; mobile offshore drilling units; and oceanographic vessels:		
Ocean, Great Lakes, or coastwise and 500 GT or more; on an international voyage and 500 GT or more; or all waters and 1600 GT or more.	Final emergency power source (automatically connected storage battery or an automatically started generator).	18 hours.\1\ \2\
Ocean, Great Lakes, or coastwise and less than 500GT; or other than ocean, Great Lakes, or coastwise, 300 GT or more but less than 1600 GT, and not on an international voyage	Emergency lighting provided by an automatically connected or manually controlled storage battery; automatically or manually started generator; or relay-controlled, battery operated lanterns.\3\ \4\.	6 hours or twice the time of run, whichever is less.

\1\ A 12-hour power supply may be especially considered for vessels engaged regularly in voyages of short duration.

\2\ The capacity for the operation of the steering gear, as required by Sec. 111.93, is for a period of 30 minutes continuous operation.

\3\ The emergency lighting requirements of Sec. 112.15-1 (b), (c), (f), and (g) must be met.

\4\ Requirements of Subpart 112.39 must be met by the relay-controlled, battery-operated lanterns.

**Cite: 46 CFR 112.15-1**

On vessels required by 112.05-5(a) to have a temporary emergency power source, the following emergency lighting and power loads must be arranged so that they can be energized from the temporary power source:

(d) Illuminated signs with the word "EXIT" in red letters throughout a passenger vessel so the direction of escape to the open deck is obvious from any portion of the vessel usually accessible to the passengers or crew, except machinery spaces, and except stores and similar spaces where the crew are not normally employed. There must be sufficient signs so that the direction of escape is obvious, with all fire doors in stairway enclosures and main vertical zone bulkheads closed and all watertight doors closed. For the purpose of this paragraph, an individual stateroom or other similar small room is not required to have a sign, but the direction of escape must be obvious to a person emerging from the room.

(e) Illumination to allow safe operation of each power operated watertight door.

**Cite: 46 CFR 112.43-7**

(a) Except as allowed in paragraph (b) of this section, the following emergency lights must be supplied from a distribution panel on the navigating bridge:

(1) Navigation lights not supplied by the navigation light indicator panel.

(2) Lights for survival craft launching operations under Sec. 111.75-16, except as allowed in Sec. 112.43-5.

(3) Signalling lights.

(4) Emergency lights:

- (i) On open decks;
- (ii) On the navigating bridge;
- (iii) In the chartroom;
- (iv) In the fire control room; and
- (v) For navigation equipment.

(b) On a mobile offshore drilling unit, the distribution panel required in paragraph (a) of this section must be in the control room.

(c) Each distribution panel required in paragraphs (a) and (b) of this section must have a fused switch or circuit breaker for each branch circuit.

**United States Interpretations Related to the  
SOLAS Cargo Ship Safety Construction Certificate**

Chapter II-1      Construction - Subdivision and stability, machinery and electrical  
installations

Part B - Subdivision and Stability

**Regulation 11.2**

Obtain USCG approval for collision bulkheads located at a distance of less than 5% or more than 8% of the length of the ship from the forward perpendicular.

**Regulations 22.4 and 22.5**

An inclining test for sister ships may be waived if a responsible officer from the shipbuilding company certifies that the subject vessel does not differ from its inclined sister ship in any way that would result in a lessening of stability characteristics.

The inclining test may be waived if a responsible officer from the shipbuilding company certifies the conditions of this paragraph are met."

**Regulations 23-1.2, 23-1.3.1 and 23-1.3.2**

A recommended list of shell doors and other watertight openings, which could lead to major flooding if left open or not properly secured, should be forwarded to the Commanding Officer, Marine Safety Centre, for approval.

A recommended list of equipment, conditions and operational procedures considered necessary to maintain watertight integrity shall be forwarded to the Commanding Officer, Marine Safety Centre, for approval.

A recommended list of elements (i.e. closures, security of cargo, sounding of alarms, etc.) considered vital to the survival of the ship and its crew shall be forwarded to the Commanding Officer, Marine Safety Centre, for approval.

Part D - Electrical Installations

**Regulation 45.5.2**

Regulations 46 CFR 111.60-2 through 111.60-9 are to be used as guidance for any exemptions to the requirements of flame retardant cables when used in speciality applications.

**Regulation 45.6.1**

If the allowance of a circuit to not be protected against short-circuit is desired, approval must be obtained from the Commanding Officer, Marine Safety Centre (MSC).

Chapter II-2      Fire Protection, Fire Detection and Fire Extinction

Part A - General

**Regulations 3.1, 3.8, 3.23.3, 3.23.4, 3.23.5, 18.1.1 and 18.1.2**

Reference should be made to parts 1, 5, 7, 6, 8 or 3 respectively, of the International Code for Application of Fire Test Procedures ( FTP Code ) when assessing the acceptability of materials. Additionally, the following guidance is given with respect to the approval of structural fire protection items :

**Equipment Approvals**

The 1974 SOLAS Convention mandates that structural fire protection materials be approved by the flag Administration.

In the United States this function is performed by the USCG, generally through independent laboratory testing and inspection. Provisions within the 1996 USCG Authorisation Act also allow the use of equipment approved by or on behalf of other governments, under certain circumstances.

For structural fire protection items the USCG recognises that, with the implementation of the IMO FTP Code, there exist acceptable IMO Standards for approval of this equipment and these standards are used by the USCG to approve "SOLAS" equipment and materials. Materials and equipment from both U.S. and foreign sources approved in accordance with the procedures contained in 46 CFR 159 will continue to be acceptable and those items manufactured in a country with which the United States has a Mutual Recognition Agreement in force, or the USCG has found to have an equivalent approval program, will also be acceptable.

Because reciprocity is not required for structural fire protection materials, the USCG will accept structural fire protection materials that are approved by a foreign Administration once the USCG has determined that a country's



approval process is acceptable. After this acceptance of a country's approval process, structural fire protection materials manufactured in that country and approved in accordance with the provisions of the IMO Fire Test Procedures Code will be accepted for use on United States ships.

### **Regulation 3.10**

*"A pantry containing no cooking appliances"* is one which contains only low heat warming equipment, has steel furnishings and is not used as a storeroom for cleaning gear, linen supplies or any other combustible material. A dining room containing such appliances shall not be regarded as a pantry.

## **Regulation 45**

The doors giving access to either of the two required means of escape shall not be lockable, except that crash doors or locking devices, capable of being easily forced in an emergency, may be employed provided that a permanent and conspicuous notice giving instructions on how to open the door or lock is attached to both sides of the door. This paragraph shall not apply to outside doors to the deckhouses where such doors are locked by key only and such key is under control of one of the vessel's officers.

### **Regulation 45.1.3**

All public spaces having a deck area of over 28m<sup>2</sup> shall have at least two exits. Where applicable, the exits shall give egress to different corridors, spaces or rooms to minimise the possibility of one incident blocking both means of escape.

### **Regulation 45.1.5**

All interior stairways, other than those within the Machinery Spaces or Cargo Holds, shall have a minimum width of 0.71 metre. The angle of inclination with the horizontal of such stairways shall not exceed 0.87 radians.

3. **ISSUE OF CERTIFICATES**

Details of the procedural arrangements are given in the extant copy of the Marine Division Survey Procedures Manual, Part D Chapter 8 and Part E Chapter 7.

4. **MAINTENANCE OF RECORDS**

Copies of all approved plans and documents, survey reports and associated records, together with copies of certificates issued in relation to the tonnage, load line and safety construction aspects of United States registered ships are to be forwarded to the United States Regional Office, Houston, for records purposes.

Details of the procedural arrangements are given in the extant copy of the Marine Division Survey Procedures Manual, Part D Chapter 8 and Part E Chapter 7.